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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,761	12/03/2003	Arlynn Walter Smith	ITDE-PNV115US	7572
23122	7590	12/14/2005	EXAMINER	
RATNERPRESTIA			CANNING, ANTHONY J	
P O BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482-0980			2879	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,761

Applicant(s)

SMITH ET AL.

Examiner

Anthony J. Canning

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 2, 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/3/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-10 in the reply filed on 7 November 2005 is acknowledged.

Claim Objections

2. The term "substantially" in claims 2, 4 and 10 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegmund (U.S. 2,979,637) in view of Orthuber et al. (U.S. 5,990,601).

5. As to claim 1, Siegmund discloses a mega-boule for use in fabricating microchannel plates (MCPs) (see Abstract), the mega-boule comprising a cross-sectional surface including at least a first area occupying a distinct portion of the cross-sectional surface (see Fig. 6; column 3, lines 33-48); the first area including a plurality of optical fibers (see Fig. 2, item 44; column 2, lines 33-48), transversely oriented to the cross-sectional surface, each optical fiber having a cladding formed of non-etchable material and a core formed of etchable material (see Figs. 2 and 3, items 44 and 46; column 3, lines 33-48). Siegmund also discloses a support bar different from the first region (see Fig. 6, item 66; column 5, lines 19-25). Siegmund fails to disclose a second area being the same as the first, and a third material between the first and second areas.

Orthuber et al. disclose a mega-boule for use in fabricating microchannel plates having first, second and third areas. The first and second regions including a plurality of optical fibers (see Fig. 10, items 32; column 4, lines 19-25). The third region is between the first and second regions (see Figs. 9 and 10, item 31; column 5, lines 19-25; calrod is a heating plate that will not

be etched by the material that etches glass). Orthuber et al. disclose that this arrangement allows for easy heating of multiple MPC plates (column 5, lines 19-25).

Therefore, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the mega-boule of Siegmund to include first, second and third regions, the third being between the first and second, as taught by Orthuber et al., to heat multiple MCP plates with ease.

6. Regarding claim 2, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Orthuber et al. further disclose a fourth area, occupying another distinct portion of the cross-sectional surface; the fourth area including another plurality of optical fibers of substantially similar materials of the optical fibers of the first and second areas; and the third area disposed interstitially between and surrounding the first, second and fourth areas (see Fig. 10, item 32; column 5, items 19-26). Orthuber et al. disclose that this arrangement allows for easy heating of multiple MPC plates (column 5, lines 19-25).

Therefore, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the mega-boule of Siegmund to include a fourth region, as taught by Orthuber et al., to heat multiple MCP plates with ease.

7. Regarding claim 3, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses that the etchable material and the non-etchable material are glass, and the non-etchable material includes a higher lead content than the etchable material (column 3, lines 32-48).

8. Regarding claim 4, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses that the a plurality of support rods transversely oriented to the cross-

sectional surface, and an optical fiber of the plurality of optical fibers and a support rod of the plurality of support rods have a cross-sectional area substantially similar to each other (see Fig.6, item 66; column 4, lines 19-22).

9. Regarding claim 5, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses that the non-etchable material of the third area includes a plurality of support rods transversely oriented to the cross-sectional surface, and the optical fibers of the first area and a portion of the plurality of support rods (see Fig.6, item 66; column 4, lines 19-22). In response to Applicant's argument that a portion of the plurality of support rods are configured for use as an MCP, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

10. Regarding claim 6, Siegmund and Orthuber et al. disclose the mega-boule of claim 5. Siegmund further discloses that the plurality of optical fibers and the plurality of support rods form a fused monolithic stack (column 3, lines 32-38). Regarding the limitation that the plurality of optical fibers and the plurality of support rods form a fused monolithic stack, ***when heated and pressed*** is a product-by-process limitation and is not given patentable weight. A comparison of the recited process with the prior art processes does Not serve to resolve the issue concerning patentability of the product. *In re Fessman*, 489 F2d 742, 180 USPQ 324 (CCPA 1974).

Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 USPQ 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed

as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 USPQ 15, see footnote 3 (CCPA 1976).

11. Regarding claim 7, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses the plurality of optical fibers of the first and second areas form transverse microchannels in cores of the plurality of optical fibers (column 3, lines 32-48). Regarding the limitation that the plurality of optical fibers of the first and second areas form transverse microchannels in cores of the plurality of optical fibers *when etched*, this is a product-by-process limitation and is not given patentable weight. A comparison of the recited process with the prior art processes does Not serve to resolve the issue concerning patentability of the product. *In re Fessman*, 489 F2d 742, 180 USPQ 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 USPQ 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 USPQ 15, see footnote 3 (CCPA 1976).

12. Regarding claim 8, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses that the first and second areas each form one of a rectangular geometry and a circular geometry (see Fig. 6; the mega-boule is round).

13. Regarding claim 9, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund further discloses that wherein the cross-sectional surface is of a predetermined area, and the predetermined area is based on accommodating semiconductor wafer fabrication tools (column 2, lines 39-46).

Art Unit: 2879


14. Regarding claim 10, Siegmund and Orthuber et al. disclose the mega-boule of claim 1. Siegmund wherein the first and second areas each includes a size corresponding substantially to a size of an active region of an MCP configured as an amplifier for an image intensifier tube (column 2, lines 39-46).


Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Canning whose telephone number is (571)-272-2486. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Canning 
9 December 2005


Nimesh D. Patel
Supervisor